(6) Introduce the C_2H_6 analytical gas mixture upstream of the nonmethane cutter. Use good engineering judgment to address the effect of hydrocarbon contamination if your point of introduction is vastly different from the point of zero/span gas introduction.

(7) Allow time for the analyzer response to stabilize. Stabilization time may include time to purge the nonmethane cutter and to account for the analyzer's response.

(8) While the analyzer measures a stable concentration, record 30 seconds of sampled data. Calculate the arithmetic mean of these data points.

(9) Divide the mean C_2H_6 concentration by the reference concentration of C_2H_6, converted to a C_1 basis. The result is the C_2H_6 combined response factor and penetration fraction, $RFPF_{C2H6[NMC\text{-}FID]}$. Use this combined response factor and penetration fraction according to §1065.660(b)(2)(iii), §1065.660(c)(1)(iii), or §1065.665, as applicable.

(10) Introduce the CH_4 analytical gas mixture upstream of the nonmethane cutter. Use good engineering judgment to address the effect of hydrocarbon contamination if your point of introduction is vastly different from the point of zero/span gas introduction.

(11) Allow time for the analyzer response to stabilize. Stabilization time may include time to purge the nonmethane cutter and to account for the analyzer's response.

(12) While the analyzer measures a stable concentration, record 30 seconds of sampled data. Calculate the arithmetic mean of these data points.

(13) Reroute the flow path to bypass the nonmethane cutter, introduce the CH_4 analytical gas mixture, and repeat the steps in paragraphs (e)(11) and (12) of this section.

(14) Divide the mean CH_4 concentration measured through the nonmethane cutter by the mean CH_4 concentration measured after bypassing the nonmethane cutter. The result is the CH_4 penetration fraction, $PF_{CH4[NMC\text{-}FID]}$. Use this penetration fraction according to §1065.660(b)(2)(iii),

§1065.660(c)(1)(iii), or §1065.665, as applicable.

[73 FR 37310, June 30, 2008, as amended at 74 FR 56513, Oct. 30, 2009; 79 FR 23770, Apr. 28, 2014]

§ 1065.369 H_2O, CO, and CO_2 interference verification for photoacoustic alcohol analyzers.

(a) *Scope and frequency.* If you measure ethanol or methanol using a photoacoustic analyzer, verify the amount of H_2O, CO, and CO_2 interference after initial analyzer installation and after major maintenance.

(b) *Measurement principles.* H_2O, CO, and CO_2 can positively interfere with a photoacoustic analyzer by causing a response similar to ethanol or methanol. If the photoacoustic analyzer uses compensation algorithms that utilize measurements of other gases to meet this interference verification, simultaneously conduct these other measurements to test the compensation algorithms during the analyzer interference verification.

(c) *System requirements.* Photoacoustic analyzers must have combined interference that is within (0.0 ± 0.5) µmol/mol. We strongly recommend a lower interference that is within (0.0 ± 0.25) µmol/mol.

(d) *Procedure.* Perform the interference verification by following the procedure in §1065.375(d), comparing the results to paragraph (c) of this section.

[79 FR 23770, Apr. 28, 2014]

NO_X AND N_2O MEASUREMENTS

§ 1065.370 CLD CO_2 and H_2O quench verification.

(a) *Scope and frequency.* If you use a CLD analyzer to measure NO_X, verify the amount of H_2O and CO_2 quench after installing the CLD analyzer and after major maintenance.

(b) *Measurement principles.* H_2O and CO_2 can negatively interfere with a CLD's NO_X response by collisional quenching, which inhibits the chemiluminescent reaction that a CLD utilizes to detect NO_X. This procedure and the calculations in §1065.675 determine quench and scale the quench results to the maximum mole fraction of